PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
OPP030929KR		
International application No.	International filing date (*day/month/year*)	Priority Date (*day/month/year*)
PCT/KR 2003/001681	20 August 2003 (20.08.2003)	10 July 2003 (10.07.2003)

International Patent Classification (IPC) or national classification and IPC

IPC[7]: G01S 17/10, 17/88, G01C 3/08

Applicant

EOSYSTEM CO., LTD.

1. This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I. ☒ Basis of the opinion
- II. ☐ Priority
- III. ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV. ☐ Lack of unity of invention
- V. ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI. ☐ Certain documents cited
- VII. ☐ Certain defects in the international application
- VIII. ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
28.01.2005	10 November 2005 (10.11.2005)
Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87 A-1200 Vienna Facsimile No. 1/53424/200	Authorized officer FUSSY S. Telephone No. 1/53424/328

Form PCT/IPEA/409 (cover sheet) (July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/KR 2003/001681

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____.

☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____.

☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____.

☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____.

☐ the claims, Nos. _____.

☐ the drawings, sheets/fig _____.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/KR 2003/001681

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-17	YES
	Claims	NO
Inventive step (IS)	Claims 1-17	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-17	YES
	Claims	NO

Citations and explanations (Rule 70.7)

The following documents have been cited in the Search Report:

D1: EP0757257A2
D2: US4208125A

Both documents represent the prior art with regard to the subject-matter of the independent claims 1, 7, 16, and 17 of the present application and show laser range finders.

D1 relates to a low-cost laser range finder receiver. The receiver includes a detector having a photodetector for generating an electrical signal in response to an impinging optical signal. The receiver has a bias control circuit for applying a bias voltage to the photodetector and adjusts the bias voltage according to two control signals. Amplifiers receive the electrical signal and pass it to a matched filter. A summing amplifier receives the filtered signal and a calibration voltage. A threshold detection circuit receives the summed output and detects a target return in the summed output.

However, neither a method for finding a range comprising the step of converting the electrical signal into range-finding data, nor comprising the step of sequentially storing the range-finding data nor detecting data exceeding a threshold value nor repeating said steps N times are disclosed in D1.

D2 discloses a rangefinder consisting of a laser transmitter which directs a series of light pulses onto the cloud layer. The returned signals together with noise are received and converted into electrical signals which are fed to AND-gates. An adder providers an output corresponding to the difference between the integrator outputs. A logic unit controls the laser transmitter and is also connected to two delay stages. At the start of measurement the logic controller triggers the signal level evaluator circuit connected to the adder. If the level set in the detector is exceeded by the adder output, an output

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V (page 1)

signal appears which indicates the presence of cloud. The integrators are reset to zero by another delayed signal and the measurement can be repeated.

Again, neither a method for finding a range comprising the step of converting the electrical signal into range-finding data, nor comprising the step of sequentially storing the range-finding data nor detecting data exceeding a threshold value nor repeating said steps N times are disclosed in D2.

The remaining claims 2 to 6, and 9 to 15 of the present application specify preferred embodiments of the subject-matter of the independent claims 1 and 7.

Summarizing, all of the above cited documents merely define the state of the art. Therefore, the subject-matter of claims 1 to 17 can be considered novel and involving an inventive step.

Industrial applicability is given.